FAX TRANSMISSION

U.S. Army Corps of Engineers
ARIZONA REGULATORY BRANCH
(602) 640-5385 FTS 261-5385

M: Ron Fowler
: Jim Vreeland
E: EPA
NE: (415) 744-1044

Pages 13 Including Cover

Painted Rock Dam Forecast

CORPS OF ENGINEERS
LOS ANGELES DISTRICT

Computed by : Bob Stuart
Date : 01-Mar-93
File Name : PTRKSPIL.W01
Comp. Time: 09:42

Changes in upstream reservoir releases, Precipitation or Storm Runoff can significantly alter the forecast results in the table below.

Date	Average Daily Flows: Granite Reef (cfs)	New Waddell Dam (cfs)	Coolidge Dam (cfs)	Lagged Flows: Granite Reef Lag 2 Day (cfs)	New Waddell Lag 2 Day (cfs)	Coolidge Dam Lag 4 Day (cfs)	Daily Average Inflow to PTRK: Forecasted Inflow Total (cfs)	Observed Inflow (cfs)	Inflow Volume (ac-ft)	PTRK Release: Daily Average Outflow (cfs)	Outflow Volume (ac-ft)	PTRK Forecast: Net Storage Change (ac-ft)	EOP Storage Content (ac-ft)	Observed Storage Content (ac-ft)	Estimated Reservoir WSE (ft)	Observed Reservoir WSE (ft)	Forecasted Percent Full	EOP Spillway Flow (cfs)	EOP Gated Flow (cfs)
25-Feb-93	24,292	560	9,100	39,600	960	6,200	42,292	42,292	83,739	21,905	43,373	40,365	2,794,364	2,794,364	666.75	666.75	112.6%	24,032	0
26-Feb-93	17,400	360	9,070	40,000	680	9,260	32,818	32,818	64,980	24,753	49,011	15,968	2,808,141	2,808,141	667.00	667.00	113.4%	25,475	0
27-Feb-93	15,000	350	6,840	24,292	580	10,250	26,657	26,657	52,781	25,526	50,542	2,239	2,808,961	2,808,961	667.01	667.01	113.4%	25,577	0
28-Feb-93	15,000	540	5,965	17,400	360	10,100	21,905	21,905	43,372	25,289	50,072	(5,700)	2,801,479	2,801,479	666.88	666.88	113.1%	24,777	223
01-Mar-93	15,000	650	7,950	15,000	350	9,100	24,450		48,451	25,000	49,500	(1,089)	2,800,390		666.86		113.1%	24,663	337
02-Mar-93	13,000	650	10,000	15,000	540	8,070	23,610		46,749	25,000	49,500	(2,752)	2,797,638		666.81		113.0%	24,375	625
03-Mar-93	13,000	650	9,400	15,000	650	6,840	22,490		44,530	25,000	49,500	(4,970)	2,792,668		666.72		112.8%	23,854	1,146
04-Mar-93	13,000	0	7,300	13,000	650	5,965	19,615		38,838	25,000	49,500	(10,662)	2,782,006		666.54		112.3%	22,737	2,263
05-Mar-93	13,000		6,640	13,000	650	7,850	21,600		42,768	25,000	49,500	(6,732)	2,775,274		666.42		112.1%	21,990	3,010
06-Mar-93	13,000		5,980	13,000	0	10,000	23,000		45,540	25,000	49,500	(3,960)	2,771,314		666.35		111.9%	21,538	3,462
07-Mar-93	13,000		5,320	13,000	0	9,400	22,400		44,352	25,000	49,500	(5,148)	2,766,166		666.26		111.7%	20,951	4,049
08-Mar-93	13,000		4,660	13,000	0	7,300	20,300		40,194	25,000	49,500	(9,306)	2,756,860		666.10		111.3%	19,889	5,111
09-Mar-93	13,000		4,000	13,000	0	6,640	19,640		38,887	25,000	49,500	(10,613)	2,746,247		665.91		110.9%	18,693	6,307
10-Mar-93	13,000		4,000	13,000	0	5,980	18,980		37,580	25,000	49,500	(11,920)	2,734,327		665.70		110.4%	17,373	7,627
11-Mar-93	13,000		4,000	13,000	0	5,320	18,320		36,274	25,000	49,500	(13,226)	2,721,101		665.47		109.9%	15,907	9,093
12-Mar-93	13,000		4,000	13,000	0	4,660	17,660		34,967	25,000	49,500	(14,533)	2,706,568		665.21		109.3%	14,297	10,703
13-Mar-93	14,000		4,000	13,000	0	4,000	17,000		33,660	25,000	49,500	(15,840)	2,690,728		664.93		108.7%	12,684	12,316
14-Mar-93	15,000		4,000	13,000	0	4,000	17,000		33,660	25,000	49,500	(15,840)	2,674,888		664.64		108.0%	11,476	13,524
15-Mar-93	17,000		4,000	14,000	0	4,000	18,000		35,640	25,000	49,500	(13,860)	2,661,028		664.39		107.5%	10,418	14,582
16-Mar-93	17,000		4,000	15,000	0	4,000	19,000		37,620	25,000	49,500	(11,880)	2,649,148		664.18		107.0%	9,511	15,489
17-Mar-93	17,000		4,000	17,000	0	4,000	21,000		41,580	25,000	49,500	(7,920)	2,641,228		664.04		106.7%	9,907	16,093
18-Mar-93	17,000		4,000	17,000	0	4,000	21,000		41,580	25,000	49,500	(7,920)	2,633,308		663.89		106.3%	8,297	16,703
19-Mar-93	17,000		4,000	17,000	0	4,000	21,000		41,580	25,000	49,500	(7,920)	2,625,388		663.75		106.0%	7,685	17,315
20-Mar-93	17,000		4,000	17,000	0	4,000	21,000		41,580	25,000	49,500	(7,920)	2,617,468		663.61		105.7%	7,073	17,927
21-Mar-93	17,000		4,000	17,000	0	4,000	21,000		41,580	25,000	49,500	(7,920)	2,609,548		663.46		105.4%	6,460	18,540
22-Mar-93	17,000		4,000	17,000	0	4,000	21,000		41,580	25,000	49,500	(7,920)	2,601,628		663.32		105.1%	5,848	19,152
23-Mar-93	17,000		4,000	17,000	0	4,000	21,000		41,580	25,000	49,500	(7,920)	2,593,708		663.17		104.7%	5,236	19,764
24-Mar-93	17,000		4,000	17,000	0	4,000	21,000		41,580	25,000	49,500	(7,920)	2,585,788		663.03		104.4%	4,624	20,376
25-Mar-93	17,000		4,000	17,000	0	4,000	21,000		41,580	25,000	49,500	(7,920)	2,577,868		662.88		104.1%	4,239	20,762
26-Mar-93	17,000		4,000	17,000	0	4,000	21,000		41,580	25,000	49,500	(7,920)	2,569,948		662.74		103.8%	3,910	21,090
27-Mar-93	17,000		4,000	17,000	0	4,000	21,000		41,580	25,000	49,500	(7,920)	2,562,028		662.59		103.5%	3,592	21,418
28-Mar-93	17,000		4,000	17,000	0	4,000	21,000		41,580	25,000	49,500	(7,920)	2,554,108		662.45		103.1%	3,253	21,747
29-Mar-93	17,000		4,000	17,000	0	4,000	21,000		41,580	25,000	49,500	(7,920)	2,546,188		662.30		102.9%	2,925	22,075
30-Mar-93	17,000		4,000	17,000	0	4,000	21,000		41,580	25,000	49,500	(7,920)	2,538,268		662.15		102.5%	2,597	22,403
31-Mar-93	17,000		4,000	17,000	0	4,000	21,000		41,580	24,889	49,280	(7,700)	2,530,568		662.01		102.2%	2,277	22,500
01-Apr-93	16,000		4,000	17,000	0	4,000	21,000		41,580	24,627	48,761	(7,181)	2,523,387		661.89		101.9%	1,976	22,500
02-Apr-93	15,000		4,000	17,000	0	4,000	21,000		41,580	24,337	48,186	(6,606)	2,516,778		661.75		101.6%	1,699	22,500
03-Apr-93	14,000		4,000	16,000	0	4,000	20,000		39,620	24,031	47,581	(6,001)	2,510,780		661.61		101.3%	1,363	22,500
04-Apr-93	13,000		4,000	15,000	0	4,000	19,000		37,620	23,669	46,865	(5,285)	2,505,495		661.49		101.1%	1,120	22,500
05-Apr-93	12,000		4,000	14,000	0	4,000	18,000		35,640	23,256	46,048	(4,468)	2,501,027		661.42		100.9%	975	22,500
06-Apr-93	12,000		4,000	13,000	0	4,000	17,000		33,660	22,797	45,138	(3,579)	2,497,448		661.36		100.8%	863	22,500
07-Apr-93	12,000		4,000	12,000	0	4,000	16,000		31,680	22,500	44,550	(2,970)	2,494,478		661.31		100.7%	781	22,500
08-Apr-93	12,000		4,000	12,000	0	4,000	16,000		31,680	22,500	44,550	(2,970)	2,491,508		661.25		100.6%	699	22,500
09-Apr-93	12,000		4,000	12,000	0	4,000	16,000		31,680	22,500	44,550	(2,970)	2,488,538		661.20		100.5%	617	22,500
10-Apr-93	12,000		4,000	12,000	0	4,000	16,000		31,680	22,500	44,550	(2,970)	2,485,568		661.14		100.4%	535	22,500
11-Apr-93	12,000		4,000	12,000	0	4,000	16,000		31,680	22,500	44,550	(2,970)	2,482,598		661.09		100.3%	453	22,500
12-Apr-93	12,000		4,000	12,000	0	4,000	16,000		31,680	22,500	44,550	(2,970)	2,479,628		661.03		100.2%	371	22,500
13-Apr-93	12,000		4,000	12,000	0	4,000	16,000		31,680	22,500	44,550	(2,970)	2,476,658		660.98		100.1%	289	22,500
14-Apr-93	12,000		4,000	12,000	0	4,000	16,000		31,680	22,500	44,550	(2,970)	2,473,688		660.92		100.0%	207	22,500
15-Apr-93	12,000		4,000	12,000	0	4,000	16,000		31,680	22,500	44,550	(2,970)	2,470,718		660.87		99.9%	125	22,500

1. The information on releases from Granite Reef, New Waddell & Coolidge are supplied by SRP and USBR and may be changed by them at any time.
2. Channel losses are assumed to be equally offset by the uncontrolled runoff.
3. Reservoir drawdown after peak outflow will be held at 25,000 cfs until spillway crest is reached.
4. EOP = End of Period.

CHRONOLOGY OF EVENTS
ON SECTION 404 ENFORCEMENT ACTION

Salt River Pima-Maricopa Indian Community Tri-City Landfill

JAN 1992 - Corps becomes aware of eroding landfill during high flows. Peak discharges estimated at _____ cfs. Initial site visits and meetings with EPA held. Ageement between COE and EPA that COE would take lead enforcement agency role to investigate possible 404 violation. Several meetings also held between Senator McCain, EPA, tribal officials, BIA, IHS, ADEQ and COE. Senator McCain stressed cooperation. The Indian Community agreed to cooperate with COE.

FEB 1992 - Prediction of further heavy rains prompts Governor to declare state of emergency and Corps requests Indian Community to initiate initial corrective measures to stabilize landfill banks in most critical areas. Several meetings and field visits held between Indian Community, ADEQ, National Guard, cities of Mesa, Tempe, and Scottsdale, Senator McCain, and COE. Indian Community initiated rock placement (temporary fix). Their efforts were later enhanced by contributions of funds, equipment, personnel and expertise from state, local cities, and federal agencies, including the Corps. Temporary bank protection placed at critical points and estimated to provide protection from flows up to 45,000 cfs.

MAR 1992 - Series of meetings held between COE, County Flood Control District, and Indian Community's Engineering Consultant (BRW) to discuss BRW's conceptual design for channelizationa and bank protection for longer term solution.

MAY 1992 - COE letter to Indian Community transmitting jurisdictional determination. Extent of unauthorized discharges of fill material determined to be approximately 3.3 acres. Indian Community was requested to prepare a plan addressing intended corrective measures. Plan is to be provided within 30 days of letter.

JUN 1992 - Indian Community supplied requested plan entailing a committment to initiate final design effort by August 30, 1992. Indian Community continues to develop funding for project. Indian Community requests ability to implement interim work.

JUL 1992 - Corps indicates, by letter, that any interim work

must be well designed, coordinated with the County Flood Control District, and must be shown not to conflict with the long term fix. Indian Community is urged to accelerate the final designs of the permanent and any interim solutions.

SEP 1992 - Corps requests confirmation that the Indian Community initiated the final design work by August 30, 1992 as previously committed. The Corps again requests that acceleration of the design work be considered.

OCT 1992 - BRW provides preliminary plans for interim channel work. Corps meets with Indian Community and indicates that the interim design appears extensive. It is suggested that such an expenditure of resources might be better directed towards the permanent solution. Indian Community agreed. Corps requests Indian Community to devise readily implementable contingency plans to deal with potentaily significant river flows.

NOV 1992 - County Flood Control provides comments on BRW's preliminary plans for interim channel work. County's assessment parallels the Corps'. Corps sends another letter to Indian Community urgently requesting confirmation that they have initiated final design efforts and stressing the importance of having a contingency plan to minimize the landfill's erosion potential during high flows.

JAN 1993 - Corps informs Indian Community of approaching storm expected to generate peak discharge of 50,000 to 60,000 cfs. Prior years bank protection initially holds, but is eventually lost as flooding exceeds expectations and peaks at 125,000 cfs. Flood of record on the Salt River (1926) is estimated to have peaked at 190,000 cfs.

+137 K

Salt River
Planning & Development Services
Civil Engineer
PIMA-MARICOPA INDIAN COMMUNITY
ROUTE 1, BOX 216 / SCOTTSDALE, ARIZONA 85256-9722 / PHONE (602) 941-7277

MEMORANDUM

25 February 1993

TO : Mr. Ron Fowler
Regulatory Branch Field Office
Corps of Engineers

FROM : Bryan D. Meyers
Civil Engineer
SRPMIC Planning & Development Services

SUBJ : Status of Corps Requests in letter dated February 10, 1993

Dear Mr. Fowler:

As stated in our telephone conversation today, we are actively resolving the outstanding issues stated in COL VanAntwerp's letter dated February 10, 1993. We are meeting with the selected consultant, BRW Inc., to negotiate the design fee for the permanent protection final design work on February 25, 1993. Per telephone conversation on 24 February 1993, Dan Cook, BRW Inc., stated that they will provide their level of protection analysis on the interim work within the next few days. We will hand carry the level of protection analysis and signed contract to your office no later than March 5, 1993.

We appreciate you granting a few days grace period to the deadline stated in the February 10, 1993 letter.

Sincerely,

Bryan D. Meyers

Bryan D. Meyers
Planning & Development Services
Civil Engineer

FEB 10 1993

Office of the Chief
Regulatory Branch

Mr. Ivan Makil
Salt River Pima-Maricopa Indian Community
Route 1, Box 216
Scottsdale, Arizona 85256-9722

Dear Mr. Makil:

The Corps of Engineers acknowledges your January 25, 1993 letter, reaffirming your interest in furthering the erosion protection of the Tri-City Landfill File Number UA002-92. Your letter indicates that the Indian Community is pursuing both interim and permanent solutions to the landfill erosion problems. You indicated during the meeting of January 22, 1993, that you intended to continue the construction of a "containment dike", which would serve as a temporary protective structure, placed at the most critical face of the landfill. You said during the meeting that the temporary structure should withstand future flow events up to 100,000 cubic feet per second. As agreed in this meeting, you and/or your engineers will perform a full evaluation of the interim work and provide the Corps with certification attesting to the level of protection afforded by this temporary structure. Please provide this certification as soon as possible.

Your letter indicates the Indian Community has contracted with an engineering consultant, BRW, Inc. to perform the necessary final design work for the permanent protection of the landfill(s), pursuant to the conceptual design developed by BRW, Inc. Your letter also indicates your intent to complete the permanent protection of the landfill by March 1994. The Corps, by letters of September 22, 1992 and November 17, 1992 had requested confirmation that the promised design work for the permanent protection, had indeed been initiated. To date, you have not satisfactorily responded to the Corps' confirmation requests.

You are again requested to provide the Corps with a formal confirmation that the promised design work has commenced. The confirmation shall consist of a signed copy of the contract agreement between you and your engineering firm, named points of contacts within the engineering firm who are tasked with the actual design work, and a detailed work schedule specifying tasks, objectives and milestones for the overall effort (design and construction) within the originally specified timeframe of 18 months (commencing on August 30, 1992). You are requested to provide this information within 15 days from the date of this letter.

Additionally, the Corps is seeking assurances that the necessary work (both design and construction) will be adequately funded throughout the process. Either a letter of credit or bond would be satisfactory. This voluntary financial commitment and good will by the Indian Community would be viewed favorably by the Corps and the public.

Your cooperation in permanently resolving the Tri-City Landfill erosion problem is essential. Less than timely response to our requests may result in the consideration of other enforcement options. Questions concerning this matter should be directed to Mr. Ron Fowler of the Corps Regulatory Branch field office at (602) 640-5385.

Sincerely,

R. L. VanAntwerp
Colonel, Corps of Engineers
District Engineer

Copies Furnished:

Senator McCain
Governor Symington
USEPA (Clyde Morris)
ADEQ (Edward Fox)
Maricopa Co. Flood Control Dist. (Ed Raliegh)
BIA (Amy Heuslein)

VANANTWERP
SPLDE

TEMMEL
SPLOC

ENSON
SPLCO

HOLT
SPLCO

GILL
SPLCO-R

2/5
CASTANON
SPLCO-R

FOWLER
SPLCO-R

CF: FILE COPY (UA002-92)
CLIPBOARD (Los Angeles)
CLIPBOARD (ARIZONA)
CESPL-CO
CESPL-OC
CESPL-DE

Salt River
PIMA-MARICOPA INDIAN COMMUNITY
ROUTE 1, BOX 216 / SCOTTSDALE, ARIZONA 85256-9722 / PHONE (602) 941-7277

January 25, 1993

Col. Robert L. VanAntwerp
District Engineer
U.S. Army Corps of Engineers
P.O. Box 2711
Los Angeles, CA 90053

RE: Protection of Tri-City Landfill

Dear Col. VanAntwerp:

This letter responds to your letter of May 22, 1992, regarding the placement of fill in the Salt River bed at locations indicated in the aerial photograph attached to your letter as well as your subsequent letters to us of July 28, 1992, September 22, 1992 and November 17, 1992 relating to the same subject matter. Additionally, it is in response to the discussion held between representatives of the U.S. Army Corps of Engineers, representatives of the Arizona Department of Environmental Quality and representatives of the Salt River Pima-Maricopa Indian Community held on January 14, 1993. At that meeting Major Rob Van Der Like suggested that representatives of the Community and the Corps sit down and review the ongoing emergency effort to protect the Tri-City Landfill from current high flows that have already been undertaken on or near the bank of the landfill and discuss the status of the permanent corrective measures plan that was begun in early 1992 as well as the need for interim efforts to protect the landfill from flood waters. The emergency work will form a part of the interim work which will be the basis for the permanent corrective measures. Representatives of the Community agreed that it was important to proceed immediately with Major Van Der Like's suggestions. A meeting was therefore set for January 22, 1993, at which time these issues would be discussed.

As you know, the Community has engaged the services of BRW, Inc. as engineers in this work. You have already received a copy of phase 1a of the BRW, Inc. bank protection plan which is designed to protect the landfill to the 100 year flood (approximately 225,000 CFS). Representatives of BRW, Inc. and the Community have reviewed the time line necessary to do the work required as well as what work will be necessary to be performed. Plan 1a envisioned a schedule of work to be completed within 18 months and that schedule is being maintained. We have attached hereto a copy of the time schedule as well as a copy of the proposed Flood Channels Typical Sections.

The work that is now being done, that is the construction of a dike berm to protect that area of the landfill which was subject to erosion on January 9, will be completed to protect against a flow of 225,000 CFS. The peak flow this year was 130,000 CFS. In addition to the dike a field survey and aerial mapping will be conducted to provide base data for a design of an interim channel for the purpose of diverting normal flows away from the dike and facilitating the final construction. The construction of the channel will be completed by the end of July, 1993. The design of phase 1a, that is the phase which is contained in the March 19, 1992 BRW, Inc. bank protection plan, will take place contemporaneously and will be completed by June 1, 1993, and construction of the first section of that phase 1A constituting approximately 1,500 to 1,800 feet as described in the typical sections attached will be constructed from Horne Road south along the face of the landfill. That section will provide the most significant protection to the landfill and will be finished by September of 1993. The final section, section 2 of phase 1a will be constructed beginning September, 1993 for completion by March, 1994.

1N
18 months

It is our view and the view of our engineers, BRW, Inc., that the work scheduled to be completed by September, 1993 will protect the landfill from erosion in the face of flood waters at least at levels such as were experienced in January, 1993.

The dike berm which is being constructed will be completed within a week and the field survey and aerial mapping will be commenced immediately. Your approval of this plan of corrective measures is important so that we can proceed with confidence that the work undertaken meets the approval of the United States Army Corps of Engineers. Essential, of course, to our efforts is close coordination between the Community and its engineers and the personnel within the Corps responsible for review and approval as plans are being prepared and construction commenced. The time schedule is predicated on a short turn around time. In any event, we know that both the Community, the Corps and the public have a significant interest in the on-time performance and construction of the works proposed.

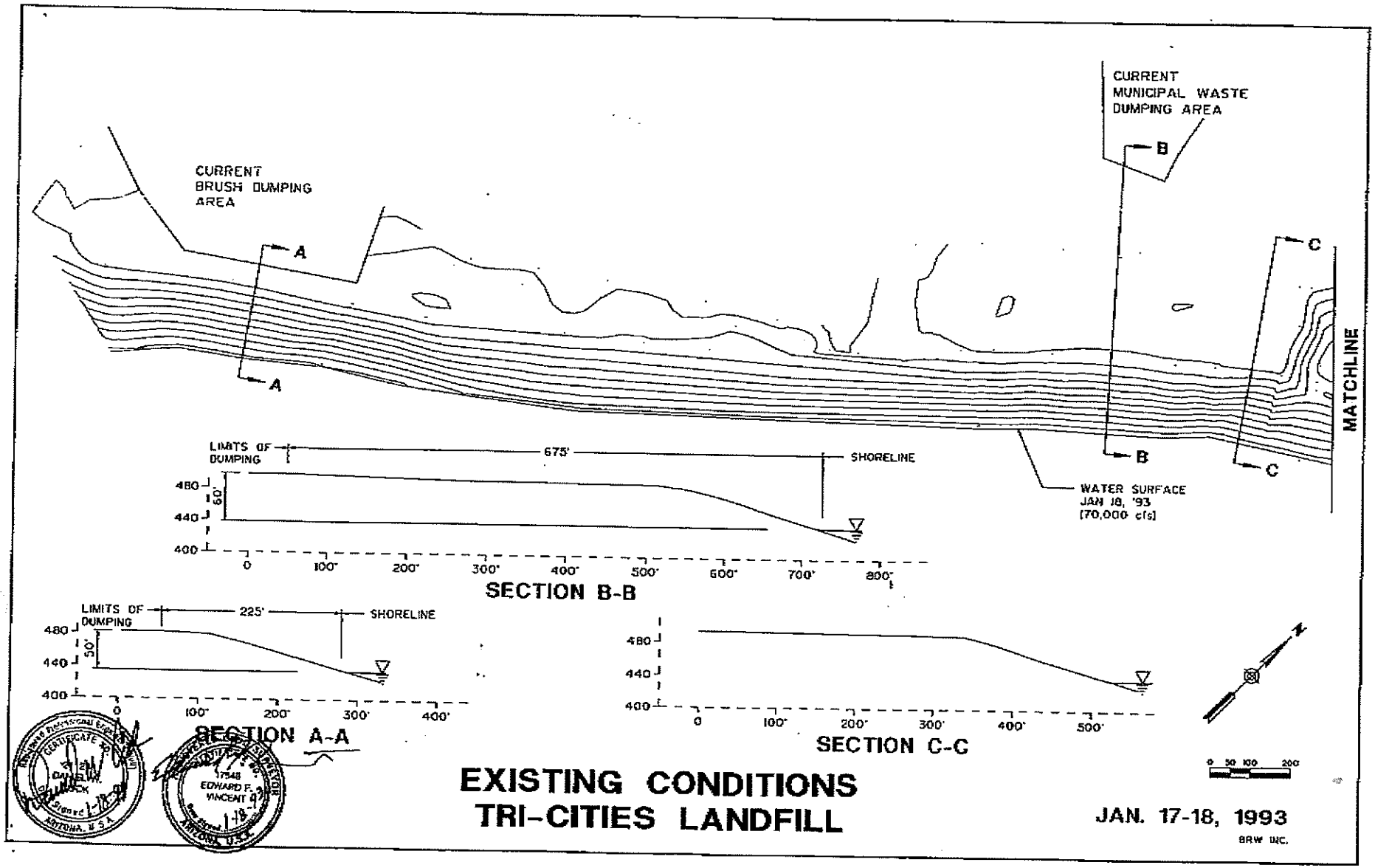
We would appreciate your comments and determination that this letter constitutes a plan and schedule acceptable to the Corps.

Yours very truly,

SALT RIVER PIMA-MARICOPA
INDIAN COMMUNITY

Ivan Makil

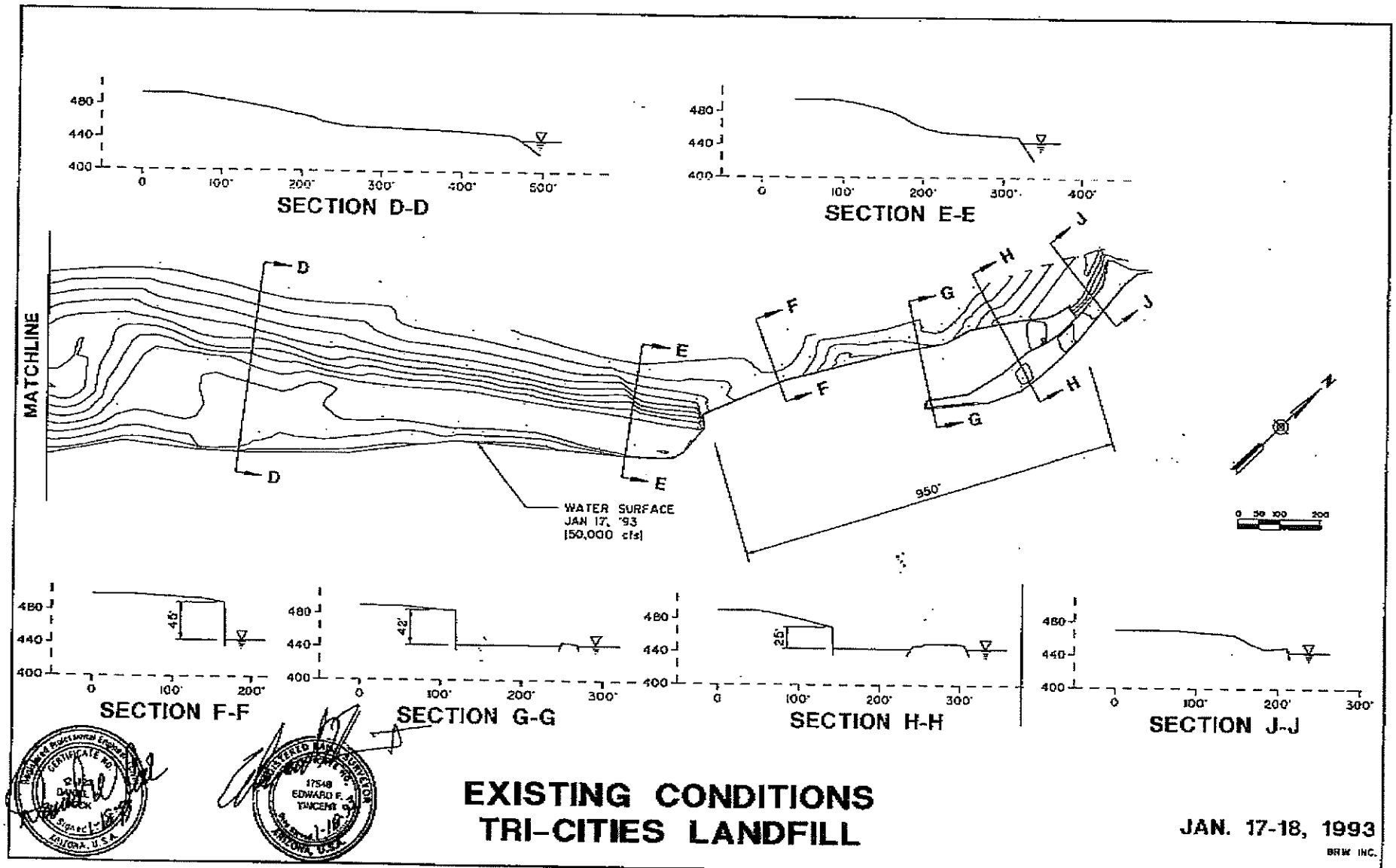
Ivan Makil
President



EXISTING CONDITIONS
TRI-CITIES LANDFILL

JAN. 17-18, 1993

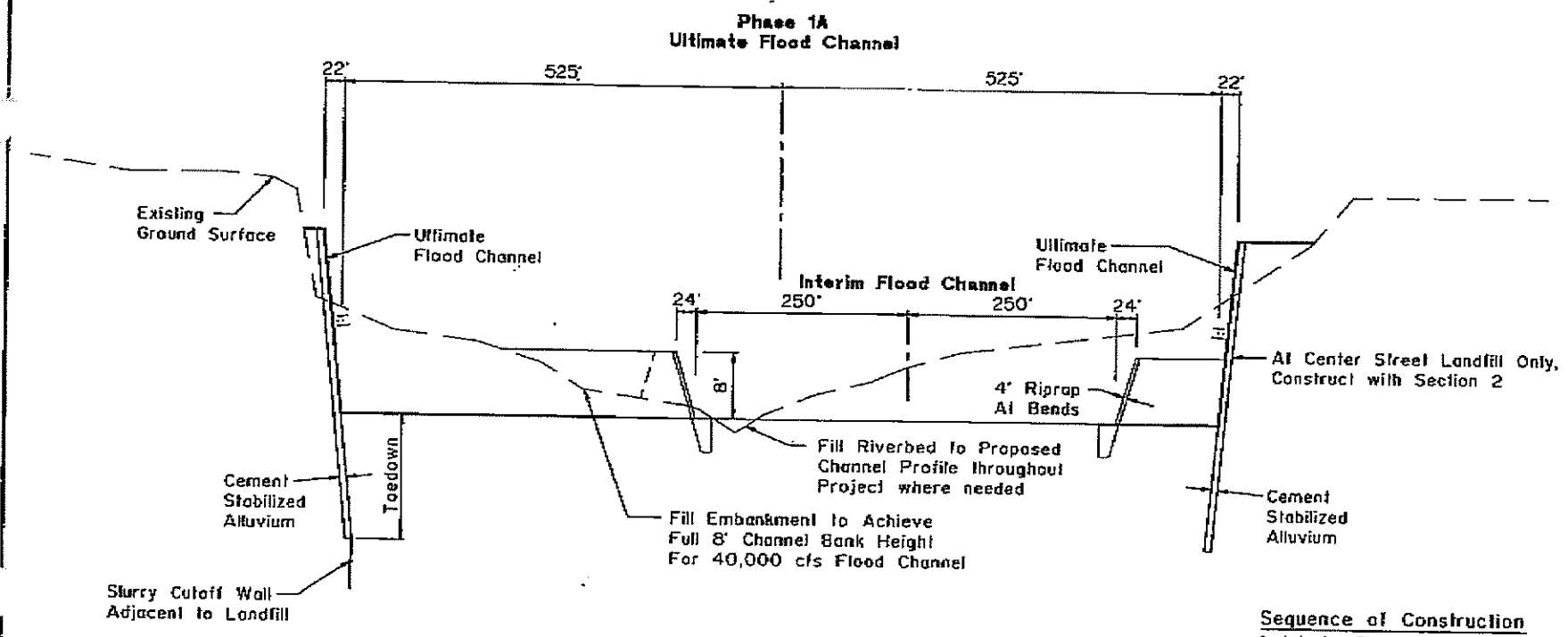
BRW INC.



EXISTING CONDITIONS
TRI-CITIES LANDFILL

JAN. 17-18, 1993

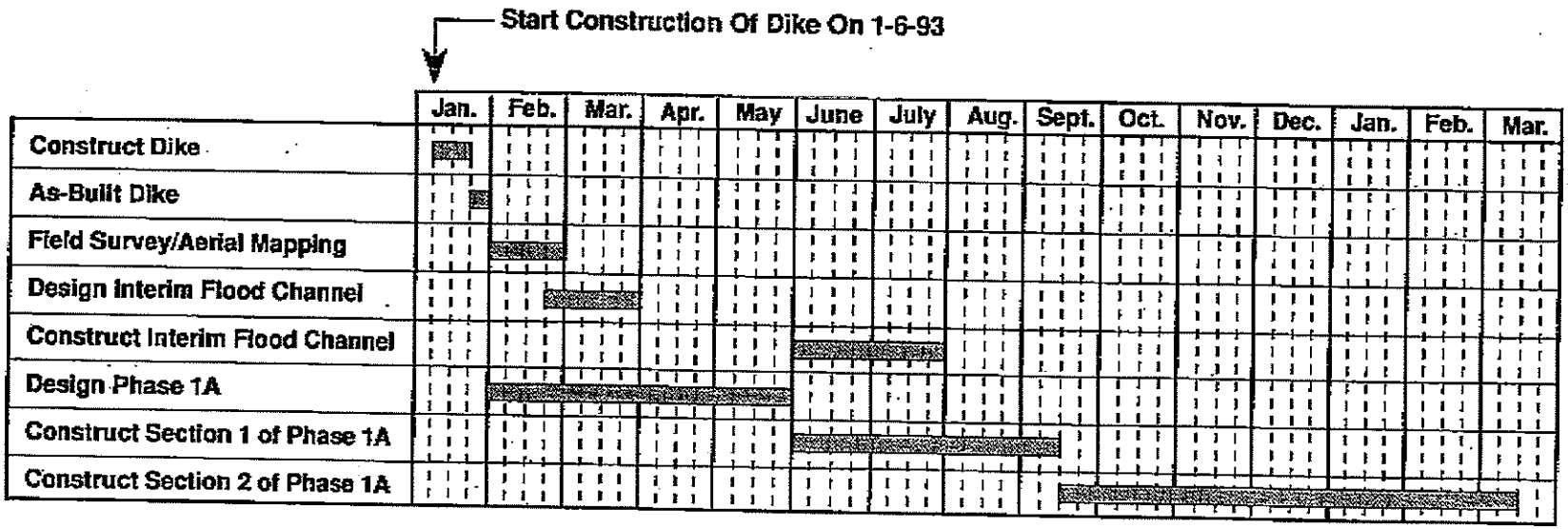
BRW INC.



PROPOSED FLOOD CHANNELS
TYPICAL SECTIONS
(Looking Upstream)

Sequence of Construction

1. Interim Channel from Horne Road to Oak Street
2. Phase 1A, Section 1, Horne Road to 1800' West
3. Phase 1A, Section 2, End of Section 1 to West End of Landfill



Tri-Cities Landfill
Salt River Channelization And Bank Protection
Design And Construction Schedule